

CLAIMS

What is claimed is:

- 1 1. A method for queuing control of variable bandwidth communications
2 channels comprising:
3 detecting a change from a first bandwidth to a second bandwidth of a
4 communication channel; and
5 adjusting a quality of service controller to compensate for the change from
6 a first bandwidth to a second bandwidth.
- 1 2. The method of claim 1, wherein adjusting the quality of service controller
2 further comprises:
3 calculating the second bandwidth;
4 providing the second bandwidth via a feedback
5 loop to a transmission rate selector; and
6 computing transmission rates.
- 1 3. The method of claim 2, wherein transmitting data further comprises
2 maintaining quality of service.
- 1 4. The method of claim 2 further comprising:
2 queuing first data cells of having fixed transmission
3 rates;
4 assigning a high transmission priority to the first data cells;
5 queuing second data cells having variable transmission
6 rates; and
7 assigning a lower priority to the second data cells.

1 5. The method of claim 4, wherein a cell selector selects first and second
2 queued cells for transmission based upon their associated priority.

1 6. An apparatus comprising:
2 means for detecting a change from a first bandwidth to a second
3 bandwidth of a communication channel; and
4 means for adjusting a quality of service controller to compensate for the
5 change from a first bandwidth to a second bandwidth.

1 7. The apparatus of claim 6, wherein the means for adjusting the quality of
2 service controller further comprises:
3 means for calculating the second bandwidth;
4 means for providing the second bandwidth via a feed back
5 loop to a transmission rate selector; and
6 means for computing transmission rates.

1 8. The apparatus of claim 7, wherein the means for transmitting data further
2 comprises:
3 means for maintaining quality of service.

1 9. The apparatus of claim 7 further comprising:
2 means for queuing first data cells of having fixed transmission
3 rates;

4 means for assigning a high transmission priority to the first data
5 cells;
6 means for queuing second data cells having variable transmission
7 rates; and
8 means for assigning a lower priority to the second data cells.

1 10. The apparatus of claim 9, wherein a cell selector selects first and second
2 queued cells for transmission based upon their associated priority.

1 11. A computer-readable medium having stored thereon a plurality of
2 instructions, said plurality of instructions when executed by a computer, cause
3 said computer to perform the method of:
4 detecting a change from a first bandwidth to a second bandwidth of a
5 communication channel; and
6 adjusting a quality of service controller to compensate for the change from
7 a first bandwidth to a second bandwidth.

1 12. The computer-readable medium of claim 11 having stored thereon
2 additional instructions, said plurality of instructions when executed by a
3 computer, cause said computer to further perform the method of:
4 calculating the second bandwidth;
5 providing the second bandwidth via a feed back
6 loop to a transmission rate selector; and
7 computing transmission rates.

1 13. The computer-readable medium of claim 12 having stored thereon
2 additional instructions, said plurality of instructions when executed by a
3 computer, cause said computer to further perform the method of maintaining
4 quality of service.

1 14. The computer-readable medium of claim 12 having stored thereon
2 additional instructions, said plurality of instructions when executed by a
3 computer, cause said computer to further perform the method of:

4 queuing first data cells of having fixed transmission

5 rates;

6 assigning a high transmission priority to the first data cells;

7 queuing second data cells having variable transmission

8 rates; and

9 assigning a lower priority to the second data cells.

1 15. The computer-readable medium of claim 14 having stored thereon
2 additional instructions, said plurality of instructions when executed by a
3 computer, cause said computer to further perform the method of selecting
4 first and second queued cells for transmission based upon their
5 associated priority by the cell selector.

1 16. An apparatus comprising:
2 one or more digital data sources;
3 a digital communication switch electronically coupled to the digital data
4 sources, wherein the switch comprises a quality of service controller and data
5 queues; and

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6 a variable bandwidth bi-directional communication channel electronically
7 coupled to the digital communication switch.

1 17. The apparatus of claim 16, wherein the quality of service controller further
2 comprises:

3 rate controllers electronically coupled to the data queues;

4 a cell selector electronically coupled to the rate controllers and the
5 communication channel; and

6 a processor electronically coupled to the rate controllers, cell selector and
7 the communication channel.